

1 What is claimed is:

2 1. A method for implementing a conversation between a client and a service, comprising:
3 receiving a message on behalf of the service;
4 determining a current state of the conversation;
5 determining valid input document types for the current state;
6 verifying whether the message is of one of the valid input document types for the current
7 state; and
8 dispatching the message to appropriate service entry points provided by the service, until
9 the service produces an output document of a valid output document type.

10 2. The method of claim 1, wherein if messages of invalid input documents types are
11 received, further comprising raising exceptions.

12 3. The method of claim 1, wherein if no valid output document is produced by the service,
13 further comprising raising exceptions.

14 4. The method of claim 1, further comprising formatting and returning to the client the
15 output document in a form appropriate to the client.

16 5. The method of claim 1, further comprising:
17 calculating a new state of the conversation from the valid output document type;
18 determining new input document types that are valid in the new state; and
19 prompting for the new input document types that are valid in the new state.

20 6. The method of claim 1, wherein the determining the current state step includes asking the
21 service for conversation specifications.

22 7. The method of claim 1, further comprising maintaining a “state” of the conversation.

23 8. The method of claim 1, further comprising retrieving a “state” of the conversation from
24 the service.

25 9. The method of claim 1, further comprising:
26 calculating a new state of the conversation from the valid output document type; and
27 invoking client methods that can produce new input documents that are valid in the new
28 state.

29 10. The method of claim 9, further comprising sending the new input documents to the
30 service.

1 11. A conversation controller that implements a conversation between a client and a service,
2 comprising:

3 an incoming context handler that receives a message on behalf of the service, wherein the
4 incoming context handler is capable of parsing the message and extracting a document type of
5 the message;

6 an interaction handler coupled to the incoming context handler and capable of identifying
7 a current state, conversation specifications and the document type of the message from the
8 message; and

9 a dispatch handler coupled to the interaction handler, wherein the dispatch handler parses
10 the conversation specification and forwards the message to service entry points of the service.

11 12. The conversation controller of claim 11, wherein the interaction handler validates if the
12 document type of the message is valid for the current state.

13 13. The conversation controller of claim 11, wherein the interaction handler calculates a new
14 state of the conversation and new valid document types for the new state from a response
15 returned by the service.

16 14. The conversation controller of claim 13, further comprising an outgoing content handler
17 capable of constructing an outgoing message that is valid for the new state, wherein the outgoing
18 content handler returns the outgoing message to the client.

19 15. The conversation controller of claim 11, further comprising a client interaction handler
20 that dispatches a reply from the service to the client and forwards a response from the client to
21 the service.

22 16. A computer readable medium comprising instructions for implementing a conversation
23 between a client and a service, the instructions comprising:

24 receiving a message on behalf of the service;

25 determining a current state of the conversation;

26 determining valid input document types for the current state;

27 verifying whether the message is of one of the valid input document types for the current
28 state; and

29 dispatching the message to appropriate service entry points of the service, until the service
30 produces an output document of a valid output document type.

1 17. The computer readable medium of claim 16, further comprising formatting and returning
2 to the client the output document in a form appropriate to the client.

3 18. The computer readable medium of claim 16, further comprising:
4 calculating a new state of the conversation from the valid output document type;
5 determining new input document types that are valid in the new state; and
6 prompting for the new input document types that are valid in the new state.

7 19. The computer readable medium of claim 16, wherein if messages of invalid document
8 types are received, further comprising raising exceptions.

9 20. The computer readable medium of claim 16, wherein if no valid output document is
10 produced by the service, further comprising raising exceptions.